

Abstract

A method for welding an end of a polygonal hollow section (PHS) to a member comprises the step of forming a weld across a surface of the PHS. The weld extends continuously from a connection weld connecting the PHS and the member to a location remote from the connection weld. The surface of the PHS is typically one or more flanges of the PHS, and the PHS is typically an RHS or SHS, such that the surface can be part of just one flange. A method for increasing the rotation capacity in a welded moment connection between a PHS and a member is also defined. The method comprises the step of forming a weld between the PHS and the member in a manner such that strain in corner(s) of the PHS, located at an end of the PHS that is weld connected to the member, is redistributed to an adjacent flange of the PHS. Alternatively the method may comprise the step of forming a weld between the PHS and the member in a manner that minimises the extent to which a heat effected zone through a flange of the PHS lies in a fracture zone adjacent to an internal end of the weld.